

REMARKS

This application has been carefully reviewed in light of the Office Action dated October 5, 2004. Claims 1, 4 to 6, 9, 10, 20 and 36 to 39 are pending in the application, of which Claims 1, 6 and 37 are independent. Reconsideration and further examination are respectfully requested.

In the Office Action, restriction was required under 35 U.S.C. § 121 to Group I, Claims 1 to 16 and 20, allegedly drawn to a network device or Group II, Claims 17 to 19 and 21 to 35, allegedly drawn to a network controller. Applicant acknowledges the provisional election of Group I and that Claims 17 to 19 and 21 to 35 are withdrawn from further consideration.

Applicant was reminded of the proper language and format for an abstract. In accordance with suggestions made in the Office Action, the Abstract has been amended and is now believed to be in proper form.

Claims 3 to 5, 8 to 16 and 20 were rejected under 35 U.S.C. § 112, first paragraph, for allegedly containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Accordingly, reconsideration and withdrawal of the rejections based on are respectfully requested.

Applicant submits that FIG. 5 to FIG. 10B and their related written descriptions illustrate how a subagent is notified of a second message. Specifically, in FIG. 5, the variable binding in the SNMP packet is analyzed to determine whether or not the variable binding of interest is a master agent management object (S510-S505). If the variable binding is not the master agent management object, a subagent packet is generated

using the tested variable binding (see page 23, lines 3 to 15). If the type of the analyzed PDU is “SetRequest”, a subagent packet is transmitted to a subagent (S705). The received subagent packet is processed in the subagent in accordance with the procedure shown in Fig. 7B. If the type of the analyzed PDU is “GetRequest” or “GetNextRequest”, the subagent packet is transmitted to a subagent (S1005) to be processed in the subagent in accordance with the procedure shown in Fig. 10B.

A described above, Applicant submits that “means for notifying subagents of the second message” as featured in the claims is described in the specification and the drawings in such a way so as to enable one skilled in the art to practice the invention. Accordingly, Applicant respectfully requests withdrawal of the rejection under 35 U.S.C. § 112, first paragraph.

Claims 1, 2, 6 and 7 were rejected under 35 U.S.C. § 102(e) over U.S. Patent No. 6,108,782 (Fletcher). Reconsideration and withdrawal of this rejection are respectfully requested.

The present invention concerns a network information management unit in which a memory resource that requires the storage of a network information management database is utilized in a distributed fashion. As a result, of a single agent that is part of the distributed system does not need a large-scale memory. The management unit, which is connected to a network and hosted by an image processing device capable of being shared by a plurality of clients via the network, is constituted by a plurality of agents distributed on a plurality of logically independent controllers within the image processing device. Each of the plurality of agents communicates with one another and generates network

management information in response to network management information requests issued by a network information manager.

Turning to specific claim language, amended independent Claim 1 is directed to a network device having a plurality of controllers connected to a network. The network device comprises a plurality of databases disposed in distributed fashion on respective ones of the plurality of controllers and storing management information relating to respective ones of the controllers and a plurality of agents distributed on the plurality of controllers. Each of the plurality of agents has communication means, means for executing distributed processing of messages issued from a network manager which manages the network, and means for generating responses to these messages. At least one agent among the plurality of agents functions as a master agent and the other agents function as subagents. The master agent comprises: means for communicating with the network manager using a protocol for exchanging management information between the network manager and the plurality of controllers to separate a message issued from the network manager into a first message including management information to be processed by the master agent and a second message including management information other than the management information to be processed by the subagents; response generating means for generating response information with regard to the first message to be responded to the network manager; and means for notifying subagents of the second message.

In contrast, Fletcher discloses distributed monitoring of network traffic using a collector. The collector collects traffic statistics managed by distributed nodes on the network. The collector does so by issuing a polling request using a multi-cast packet. The collector compiles the traffic statistics to create performance data for the network and

informs a network manager of the performance data. An agent hosted by a node in Fletcher performs four major functions, namely: (1) receiving and responding to messages from the collector and configuring the agent's operation to conform to the collector instructions; (2) RMON analysis and compiling network traffic statistics; (3) capturing packets at the agent and forwarding packet streams to the collector; and (4) receiving and executing downloadable software modules.

However, Fletcher does not disclose that a master agent separates a message received from a network manager into separate messages to be processed by the master agent and to be sent to subagents. Specifically, Fletcher fails to disclose a master agent communicating with a network manager using a protocol for exchanging management information to: (i) separate a message issued from the network manager into a first message including management information to be processed by the master agent and a second message including management information other than the management information to be processed by subagents, (ii) response generating means for generating response information with regard to the first message to be responded to the network manager, and (iii) means for notifying subagents of the second message.

As the cited reference neither discloses nor suggests at least the feature of a master agent separating a message into management information to be processed and non-management information to forward to other agents acting as subagents, Applicant submits that amended independent Claim 1 is now in condition for allowance and respectfully requests same.

Amended independent Claim 6 is directed to a method of controlling a network device substantially in accordance with the operation of the network device of

Claim 1. Applicant submits that the discussion from above with regard to Claim 1 applies equally to Claim 6. Therefore, Applicant believes that amended independent Claim 6 is now in condition for allowance and respectfully requests same.

Newly added Claim 37 is directed to a network system substantially in accordance with the network device of Claim 1. Applicant submits that the discussion from above with regard to Claim 1 applies equally to Claim 37. Therefore, Applicant believes that Claim 37 is in condition for allowance and respectfully requests same.

The other claims in the application are each dependent from the independent claims and are believed to be allowable over the applied references for at least the same reasons. Because each dependent claim is deemed to define an additional aspect of the invention, however, the individual consideration of each dependent claim on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, and no other matters being raised, the entire application is believed to be in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Applicant's undersigned attorney may be reached in our Costa Mesa, CA office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



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